

Investigation of tick-borne pathogens by conventional and molecular techniques in cattle of North-Eastern region of India

Gautam Patra^{*a}, Subhamoy Ghosh^a, Biswadeep Behera^b, Sonjoy Kumar Borthakur^a, Basanta Saikia^c, Pinaki Bhattacharyay^b, Rahul Singh Arya^b, Ashis kumar Panigrahi^d, Sk Sahanawaz Alam^e, Apurba Debbarma^f and Ishita Maity^b

^aDepartment of Veterinary Parasitology (G. Patra ORCID id: <https://orcid.org/0000-0002-0093-5995>; S. Ghosh ORCID id: <https://orcid.org/0000-0003-0688-345X> ; College of Veterinary Sciences and Animal Husbandry, Central Agricultural University, Selesih, Aizawl, Mizoram, India.

^bDepartment of Veterinary Pathology; College of Veterinary Sciences and Animal Husbandry, Central Agricultural University, Selesih, Aizawl, Mizoram, India.

^c Department of Veterinary Surgery & Radiology; College of Veterinary Sciences and Animal Husbandry, Central Agricultural University, Selesih, Aizawl, Mizoram, India.

^dPro-Vice Chancellor, University of Burdwan, Eco toxicology Laboratory, Department of Zoology, University of Kalyani

^eMicrobiology Lab; Department of Botany, Garhbeta College, Paschim Midnapore, West Bengal, India

^fDepartment of Veterinary Parasitology; CVSc&AH, Agartala, Tripura, India

*Corresponding author e-mail: *Gautam Patra, Department of Veterinary Parasitology, College of Veterinary Sciences and Animal Husbandry, Selesih, Aizawl, India. Tel: +91 8582859415; E-mail: dr.gautampatra@yahoo.co.in*

Abstract

The present study underscores the investigation on prevalence of tick-borne pathogens of cattle both from hosts as well vectors from this part of India by conventional blood smear examination and through molecular techniques. A total of 1,153 cattle belonging to different age groups, breeds, sex were screened during the period from April, 2020 to March, 2021. Blood smear examination as well as PCR assay were followed to detect tick-borne pathogens in collected samples. The tick species recorded were *Rhipicephalus (Boophilus) microplus*,